

SECTION 1445

PRIVATE PLUMBING

1445.0100 GENERAL

1445.0101 Description of Work. The work under this Section shall consist of furnishing all labor, materials, equipment, and incidental fittings required for the installation of private plumbing, all in accordance with the details shown on the plans and the requirements of these specifications and of the International Plumbing Code. Where there is conflict between the plans and specifications and the International Plumbing Code, the more stringent requirements shall apply. Under this Section, the Contractor shall do the following, all as called for in the specifications or as shown on the approved plans:

- Relocate meters and meter boxes
- Install new meters and meter boxes
- Install new service lines
- Abandon existing water lines

1445.0102 Permits. The Contractor is required to obtain permits for private plumbing and electrical grounding work from the following jurisdictions, as required:

- City of Tucson – Development Services Center (520) 791-5550
- Pima County – Development Services (520) 740-6511
- Town of Marana (520) 382-1900
- City of South Tucson (520) 792-2424

A permit will be required for each address receiving private plumbing.

Cost of permits shall be included in the bid item for private plumbing.

1445.0103 Plumbing Coordination. The Contractor shall assign a person (hereafter referred to as the Plumbing Coordinator) to meet with property owners to obtain a signed Right of Entry. He/she shall also prepare a drawing of the proposed route for the new private plumbing showing the point of connection and new meter location. This drawing will be attached to the Right of Entry form.

The Plumbing Coordinator shall be available to both the Engineer's representative and property owners for the contract's duration. The Plumbing Coordinator shall be available to meet with property owners before or after normal work hours and on weekends.

Before construction, the Plumbing Coordinator shall verify the location, size, and meter number of each existing meter. This information will be compared with the plans and other Tucson Water documentation to inform the Engineer of any errors or omissions.

SECTION 1445

On properties where only a service stub is required, the Plumbing Coordinator shall verify the size of the existing service stub and provide a drawing showing the new location. If there is no existing service to the property and a new service line is to be installed, then the drawing should state: "NO EXISTING – NEW SERVICE".

Locations for the new meter and private plumbing as shown on the approved plans are approximate, and adjustment in the field shall be made as required.

1445.0200 PRODUCTS

1445.0201 Materials. Approved private plumbing pipe material shall be polyvinylchloride (PVC) pipe. (In any case, electrical grounding shall be maintained per code.)

New **private plumbing pipelines** shall be a minimum of 1 inch in diameter, and any new private plumbing pipeline over 100 feet in length shall be upsized per the following table:

Table 1445-1
Private Plumbing Pipeline Diameters

Existing Line Size (inches)	Upsized Line Size (inches)
1	1-1/2
1-1/2	2
2	2-1/2

If lengths of lines and/or diameters are different than those shown above, the Tucson Water Inspector will be contacted for direction.

For new private plumbing pipelines over 200 feet in length, the estimated length and pipe diameter required will be shown on the plans and/or called out by the Engineer.

1445.0300 EXECUTION

1445.0301 General. The Contractor shall furnish and install all labor and materials required to connect private plumbing to the Tucson Water distribution system per International Plumbing Code (IPC) and/or Tucson Water Standards and Specifications, whichever is most stringent.

1445.0302 Installation. The Contractor is responsible for restoring the work area to its original condition. Therefore, prior to commencing work, **the Contractor shall videotape the work area** to establish a record of pre-construction conditions. The videos must identify the work site address and features, such as vegetation; fences; and structures, both permanent and temporary. The Contractor must provide 1 copy of each video to the Owner with the monthly

SECTION 1445

pay request. Each video must be labeled and accompanied by a list of addresses contained in the video.

The Contractor will make service taps and run service lines to the locations shown on the approved plans, Plumbing Coordinator's drawings, or as instructed by the Engineer's representative.

The Contractor will install new meter boxes and bricks (provided by Tucson Water), or salvage and relocate existing meter boxes and bricks, to the new meter location as directed by the Engineer's representative. The costs for installation and relocation shall be included in bids for service renewals, service stubs, or private plumbing. The Contractor must coordinate with the Tucson Water Inspector for meter, meter box, and brick material if necessary. The Contractor is responsible for pick-up and delivery of items to project site.

Service taps and work on private property will not begin until the Contractor has done the following:

- (1) Received a Right of Entry form with drawing attached
- (2) Informed the Engineer of any errors and omissions
- (3) Given 48-hour advance notification to both the property owner and Engineer's representative

The Contractor shall submit detailed as-built drawings for all private plumbing work indicating the point of connection with distances. These as-built drawings must be submitted prior to the release of any retention money. The costs for as-built drawings shall be included in the bid item for private plumbing.

After the new private plumbing is connected and in service, the Contractor will abandon services and cut and plug water mains as shown on the approved plans or directed by the Engineer's representative. The cost for this work will be included in the bid items for private plumbing per linear foot of pipe.

1445.0303 Workmanship. All work shall meet or exceed the International Plumbing Code standards adopted by the permitting agency. This includes any electrical grounding construction necessary to meet code. Costs for electric grounding construction shall be bid as a separate item.

All obstructions shall be protected from damage by the Contractor during construction and until completion of work. All damaged improvements and obstructions are to be replaced in kind and shall be included in the total base bid cost or at the Contractor's own expense.

SECTION 1445

The Contractor will not begin the private plumbing work until he/she has done the following:

- (1) Obtained a copy of the drawing attached to the Right of Entry
- (2) Informed the Contractor of any errors or omissions
- (3) Given proper notice to the property owners, Engineer's representative, and permitting agency

All work on private plumbing shall be done by persons licensed and bonded to perform the work. The Contractor must have at least 5 years' experience with similar work. Proof of experience and certification shall be furnished to Tucson Water at least 2 weeks prior to commencement of any work.

Private plumbing normal working hours shall be from 7 a.m. to 5 p.m., Monday through Friday. If the Contractor desires to perform any work beyond normal working hours, or on Saturday, Sunday or a national holiday, he/she shall have the Contractor submit a request in writing to the Engineer, and receive approval before he/she starts such work.

Private plumbing work shall include installation of: private water lines, in-line ball valve with box, ball valve at new meter site, new or relocated water meter, anti-siphon valves on hose bibs, or any other item required by the Plumbing Codes.

New plumbing will extend from the new meter location to a point of connection on existing plumbing as shown on the Plumbing Coordinator's drawing or instructed by the Engineer's representative.

NOTE: It is the intent of Tucson Water to minimize the time that trenches are open on private property. Therefore, trenches should only be opened the same day that pipe is installed, and trenches should not be opened on Fridays or before 3-day holiday weekends, when the trenches would have to stay open three, four, or more days for inspection.

In the case that a trench must be left open for a prolonged period, the Contractor must keep the occupant informed and take any steps necessary to minimize inconvenience to the occupant and ensure access. In some cases, this may mean that portions of the trench must be backfilled and then dug out again for the required inspection. Any property damage caused by prolonged trench openings will be repaired or replaced by the Contractor at his/her own expense.

Inspection of work on private property shall be conducted by the permitting agency with advance notice prior to inspection per their standard notification procedure.

SECTION 1445

The Contractor shall flush lines after pressure testing and prior to connecting to existing plumbing. The Contractor shall coordinate with the property owner to flush the house interior plumbing at the time of connection.

The Contractor shall cut and plug the existing plumbing from the old meter location at a point inside private property as directed by the Engineer's representative.

1445.0304 Work Notices. Prior to starting work in easements, the Contractor shall give 2-week advance notice to all affected property owners and all public and/or private agencies that utilize the easements for travel.

The Contractor shall give 2 working days' advance notice to the affected property owner and the Engineer's representative that work is going to be done on the specified property. **Written notices to property owners shall be furnished by the Contractor.** If the occupant of the property is not the property owner, the occupant will also be notified 2 working days in advance.

The Contractor must attempt to inform the occupant whenever they are working on private property or impacting the occupant's water service.

Upon request, the Contractor shall provide the Engineer with documentation that prior notice was given to affected property owners or agencies.

1445.0305 Grading in Easements. Upon completion of all water work in easements, the easement shall be graded to a reasonably smooth and uniform surface. Easements shall be graded to drain properly and shall follow the contour of the land. Where the easement is used as a walkway through the neighborhood—particularly by residents using canes or walkers—care must be taken so that the re-graded easement can be traversed without difficulty. Easements subject to vehicular travel must be compacted to the specifications required for alleys.